

October 31, 2012

Ms. Mary C. Patton, P.E.
Director of Regulatory - NMSD
Range Production Company
100 Throckmorton Street, Suite 1200
Fort Worth, Texas 76102

Re: Implementation Report
Second Quarterly Sampling Event – August 2012
Quarterly Residential Well Sampling Project
Parker County, Texas
EarthCon Project No. 212157.00

Dear Ms. Patton:

EarthCon Consultants, Inc. (EarthCon) is pleased to provide Range Production Company (Range) this report documenting implementation of the Second Quarterly Sampling Event of the *Quarterly Residential Well Sampling Project in Parker County, Texas*.

All activities were conducted in accordance with EarthCon's April 25, 2012 *Revised Scope of Work and Cost Estimate (2nd Revision) for Environmental Consulting Services* (approved on April 27, 2012) and the *Final Quarterly Residential Well Sampling Work Plan*, dated May 7, 2012 (May 2012 Work Plan, see **Attachment 1**) submitted electronically to Range on May 8, 2012. This report specifically documents collection of water samples from residential wells and coordination with analytical laboratories; evaluation and interpretation of associated data are not part of the scope of work, and hence, are not discussed in this report.

1.0 PREPARATORY ACTIVITIES

Upon receiving approval from Range, EarthCon contacted Accutest Laboratories (Accutest) and Milco Safety Rental to coordinate delivery to EarthCon's offices of all needed sample containers, shipping materials and sampling equipment; coordination of delivery of sample containers and shipping materials from Isotech Laboratories (Isotech) was conducted through Mr. Alan Kornacki of Weatherford, a Range consultant.

EarthCon was informed by Range that no sampling was to be conducted on wells for which the property owner had failed to return an executed consent form to Range; this resulted in the number of wells to be sampled during the second quarterly sampling event to reduce to 15 wells (see **Table 1**). Mary Patton of Range coordinated scheduling of the sampling activities with the property owners and a final schedule was received by EarthCon on August 6, 2012.

2.0 FIELD ACTIVITIES

The EarthCon field crews mobilized to the project area on Thursday August 16, 2012, and commenced preparations for sampling, including acquiring sampling materials and calling the landowners to confirm the visits. Sampling occurred from Friday August 17, 2012 through Sunday August 19, 2012, and was performed in general accordance with protocols presented in detail in the May 2012 Work Plan. As noted on **Table 1**, the field crews attempted sampling WW21 on Saturday August 18, 2012, but were not able to get the pumping system to work; the property owner was contacted, via phone calls to Joel Van Newkirk, without success. The situation was communicated to Range and it was decided that no additional attempts would be made to sample that well unless the property owner was present to address the pump issue; a return call on Monday, after sampling activities had finalized, indicated that Mr. Van Newkirk had been out of town during the weekend. Therefore, water well WW21 was not sampled during this event. Field activities, including packing and demobilization, culminated on Monday August 20, 2012.

While confirming sample receipt at the laboratories, on August 23, 2012 EarthCon personnel identified an error in the sampling process for water wells WW10 and WW18: groundwater samples had been collected in the 1L bottles used for analysis of dissolved gases at Isotech, instead of the 40mL vials used for Analysis of BTEX and dissolved gases at Accutest. EarthCon communicated the finding to Range and contacted the property owners to coordinate re-sampling at these wells; re-sampling activities were conducted on Tuesday August 28, 2012. **Table 1** provides a summary of the samples collected during the second quarterly sampling event.

The field work was conducted in Level D personal protective equipment (PPE), in accordance with a site-specific Health and Safety Plan (HASP), and after health and safety meetings were conducted at the start of each day. All ambient air readings demonstrated a safe environment with no health or safety concerns. No health or safety incidents occurred during EarthCon's sampling activities.

In general, well water samples were collected from existing sampling ports (e.g., spigots, tank inlet pipes, etc.) prior to softening or other modification/treatment of the water stream, using typical protocols presented in Appendix A of the May 2012 Work Plan. At the property owner's request, and as approved by Range, a sampling spigot was installed for WW20 on August 18, 2012; a photograph of this installation is included in the well-specific report in **Attachment 2**.

In a few instances, as noted in **Table 1**, pre-treatment water samples could not be obtained due to the manner in which the well and water treatment infrastructure was constructed (i.e., piping from the wellhead was hard-plumbed to a water treatment/softening tank, or there was no ready access to pre-treated water). In such cases, treated water was collected from existing post-treatment spigots, or samples were collected inside treatment tanks at the inlet. In addition, in the cases of wells WW10 and WW18, where samples were collected from a tank inlet, the sample for analysis at Isotech could not be obtained as there was no room to install a hose so that the laboratory-prescribed sampling protocol could be implemented. Additional well water samples were collected for quality control purposes; these samples consisted of: a field duplicate (at WW13); a matrix spike/matrix spike

duplicate pair (at WW14A); an equipment blank, and three trip blanks (one for each shipped cooler containing samples for analysis of volatile constituents).

All samples were labeled, packaged per laboratory instructions, and shipped to Accutest and Isotech via common courier under chain-of-custody documentation. The labels and chain-of-custody forms identified the analyses required for each sample, as established in the May 2012 Work Plan.

Pertinent field observations and measurements were recorded in well-specific field forms, and photographs were taken at each sampling location. The completed field forms and photographic records are grouped per well and presented in **Attachment 2**.

3.0 LABORATORY COORDINATION

EarthCon confirmed receipt of all samples at Accutest and Isotech; in addition, for samples submitted for analysis at Accutest, the sample receipt forms were reviewed to verify that samples were received in good condition and were correctly logged for the appropriate analyses.

EarthCon's laboratory coordination activities concluded by verifying that all samples submitted to Accutest were analyzed within holding time and that all analytical results were provided; analytical data packages and summary tables were directly submitted to Range via electronic mail by Accutest, and are included in **Attachment 3** for ease of reference.

4.0 CLOSING

EarthCon appreciates the opportunity to provide environmental consulting services to Range Production Company. Please do not hesitate to contact the undersigned at (281) 240-5200, if you have any questions regarding this report.

Sincerely,



Earl H. Scott
Project Principal



Gabriela P. Floreslovo
Sr. Project Engineer

Enclosures:

Table 1 – Summary of Samples Collected – August 2012

Attachment 1 – Copy of April 2012 Work Plan

Attachment 2 – Well-Specific Field Forms and Photographic Records

Attachment 3 – Well-Specific Data Packages and Summary Tables (as submitted by Accutest)

Table 1
Summary of Samples Collected – August 2012